OBSERVATIONS & RECOMMENDATIONS

After reviewing data collected from **STINSON LAKE** the program coordinators recommend the following actions.

FIGURE INTERPRETATION

- Figure 1: These graphs illustrate concentrations of chlorophyll-a in the water column. Algae are microscopic plants that are a natural part of lake ecosystems. Algae contain chlorophyll-a, a pigment necessary for photosynthesis. A measure of chlorophyll-a can indicate the abundance of algae in a lake. The historical data (the bottom graph) show a *stable* in-lake chlorophyll-a trend. The slight increase in algal abundance in July was most likely caused by rain prior to testing, which caused an increase of nutrients being washed into the lake. Chlorophyll concentrations have remained well below the NH mean reference line for over 10 years! While algae are present in all lakes, an excess amount of any type is not welcomed. Concentrations can increase when there are external and internal sources of phosphorus, which is the nutrient algae depend upon for growth. It's important to continue the education process and keep residents aware of the sources of phosphorus and how it influences lake quality.

- Figure 2: Water clarity is measured by using a Secchi disk. Clarity, or transparency, can be influenced by such things as algae, sediments from erosion, and natural colors of the water. The graphs on this page show historical and current year data. The lower graph shows a *stable* trend in lake transparency. The slight increase in algal abundance in July might have caused the decrease in water clarity at that time. Mean transparency results were slightly higher this season, and have remained well above the average for NH lakes and ponds. The 2000 sampling season was considered to be wet and, therefore, average transparency readings are expected to be slightly lower than last year's readings. Higher amounts of rainfall usually cause more eroding of sediments into the lake and streams, thus decreasing clarity.

- Figure 3: These figures show the amounts of phosphorus in the epilimnion (the upper layer in the lake) and the hypolimnion (the lower layer); the inset graphs show current year data. Phosphorus is the limiting nutrient for plants and algae in New Hampshire waters.

Too much phosphorus in a lake can lead to increases in plant growth over time. These graphs show a *stabilizing* trend for in-lake phosphorus levels. July epilimnetic phosphorus concentrations were elevated most likely as a result of the amount of rain received prior to testing. This increase in phosphorus raised chlorophyll-a concentrations, which decreased water clarity. Hypolimnetic phosphorus concentrations remained stable throughout the season, and concentrations in both layers are well below the median value for NH lakes. One of the most important approaches to reducing phosphorus levels is educating the public. Humans introduce phosphorus to lakes by several means: fertilizing lawns, septic system failures, and detergents containing phosphates are just a few. Keeping the public aware of ways to reduce the input of phosphorus to lakes means less productivity in the lake in the lake. Contact the VLAP coordinator for tips on educating your lake residents or for ideas on testing your watershed for phosphorus inputs.

OTHER COMMENTS

- **Please note** in June, August, and September this summer phosphorus levels were found to be less than 5 µg/L in Cross Road Brook. In August and September phosphorus levels were less than 5 ìg/L in Sucker Brook, and for every month this summer, Outlet phosphorus levels were also less than 5 ìg/L. Phosphorus levels in the epilimnion and hypolimnion were less than 5 ìg/L in June. The NHDES Laboratory Services adopted a new method of analyzing total phosphorus this year and the lowest value that can be recorded is 'less than 5 µg/L'. If this caused an increase in the average phosphorus for either of the layers we would like to remind the association that a reading of 5 µg/L is still considered low for New Hampshire's waters.

- In 2000, small amounts of the blue-green alga *Merismopedia* were observed in the plankton sample (Table 2). This is the second season that this alga has been observed in the plankton sample. We suggest scheduling the annual lake visit with the VLAP coordinator in July since blue-green algae tend to flourish in mid to late summer. By sampling in July, we would be able to determine when the blue-greens are of greatest concern to the lake. Blue-green algae can reach nuisance levels when sufficient nutrients and favorable environmental conditions are present. While overall algae abundance continues to be low in the lake, the presence of these indicator species should serve as a reminder of the lake's delicate balance. Continued care to protect the watershed by limiting or eliminating fertilizer use on lawns, keeping the lake shoreline natural, and properly maintaining septic systems and roads will keep algae populations in balance.

- Conductivity readings throughout the lake decreased this season from the slight increase due to the dry weather last year (Table 6).

Conductivity was particularly low this year, most likely as a result of the excess rains, which tend to dilute and remove pollutants from the surface waters. Conductivity increases often indicate the influence of human activities on surface waters. This decreasing trend is a positive sign. Septic system leachate, agricultural runoff, iron deposits, and road runoff can each influence conductivity readings.

- Dissolved oxygen was again high at all depths of the lake (Table 9). Oxygen saturation was above 100% at 8 meters in August. This is most likely due to a layer of algae at that depth. Since the Secchi disk was visible below 8 meters, it is likely the light can penetrate sufficiently to that depth for algae to photosynthesize. Algae release oxygen as a product of photosynthesis and this often leads to the spike in oxygen levels seen in the lake. The presence of oxygen throughout the water column is a positive sign for the lake, and an indicator of the lake's overall health.

- Phosphorus concentrations were elevated in July in Collins, Cross Road, Doe Town, and Sucker Brooks (Table 8). There was a heavy amount of rain prior to testing the lake. The rainfall washed excess phosphorus into the streams from the watershed, and this in turn caused an increase in epilimnetic phosphorus concentrations. The increased phosphorus input from the streams led to a slight increase in algal concentrations in the lake. It would be useful to uncover the reasons for the increases in phosphorus during rain events so that the growth of blue-green algae is kept at a minimum. This can be accomplished by conducting watershed walks and bracketing the streams to determine the causes of elevated nutrient and conductivity levels.

NOTES

- Monitor's Note (7/16/00): Rain prior 12 hours.

USEFUL RESOURCES

Stormwater Management and Erosion and Sediment Control Handbook. NHDES, Rockingham County Conservation District, USDA Natural Resource Conservation Service, 1992. (603) 679-2790.

Soil Erosion and Sediment Control on Construction Sites, WD-WEB-12, NHDES Fact Sheet, (603) 271-3503 or www.state.nh.us

Lake Protection Tips: Some Do's and Don'ts for Maintaining Healthy Lakes, WD-BB-9, NHDES Fact Sheet, (603) 271-3503 or www.state.nh.us

In Our Backyard. 1994. Terrence Institute, 4 Herbert St., Alexandria, VA. 22305, or call (800) 726-5253, or www.terrene.org

Effects of Phosphorus on New Hampshire's Lakes, NH Lakes Association pamphlet, (603) 226-0299 or www.nhlakes.org

Riparian Forest Buffers: Function and Design for Protection and Enhancement of Water Resources, NA-PR-07-91, USDA Forest Service.

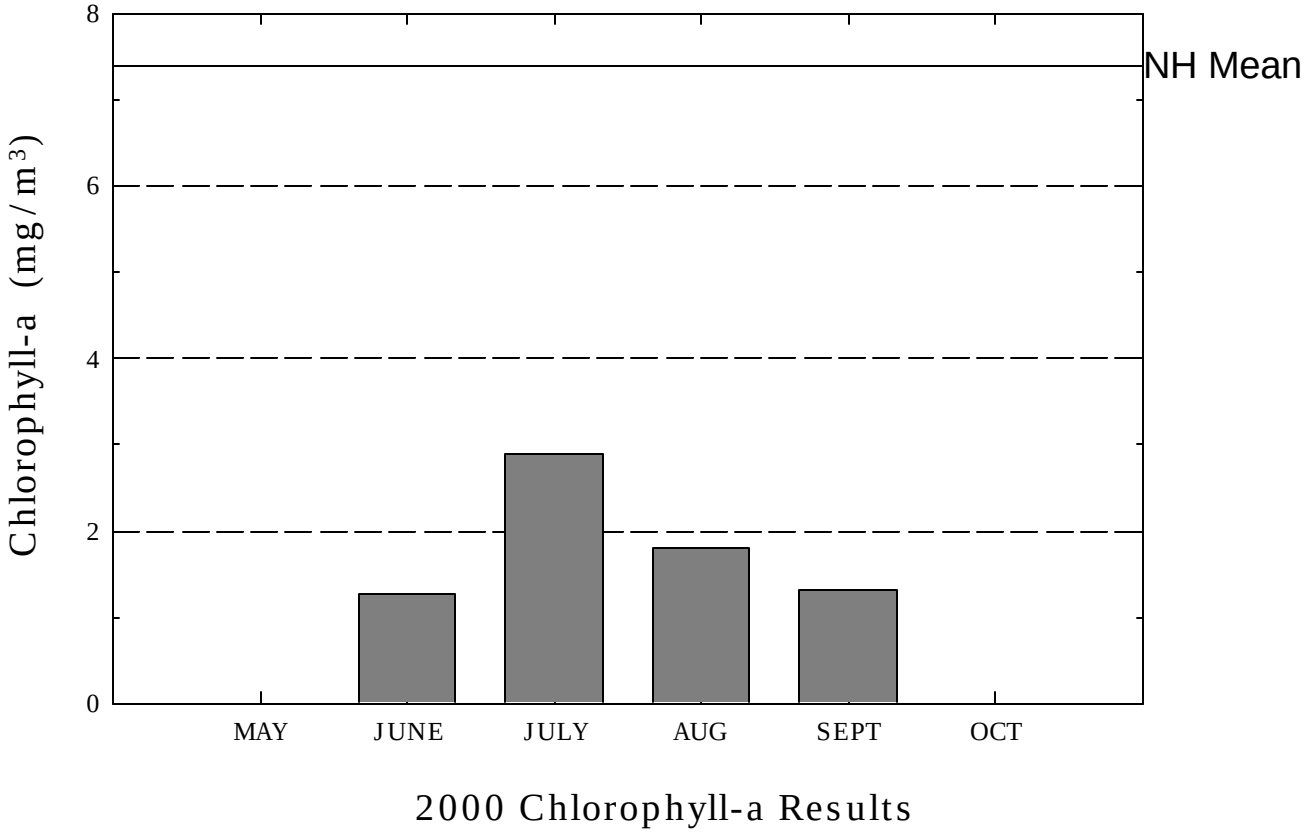
The Watershed Guide to Cleaner Rivers, Lakes, and Streams, Connecticut River Joint Commissions, 1995. (603) 826-4800

Aquatic Plants and Their Role in Lake Ecology, WD-BB-44, NHDES Fact Sheet, (603) 271-3503 or www.state.nh.us

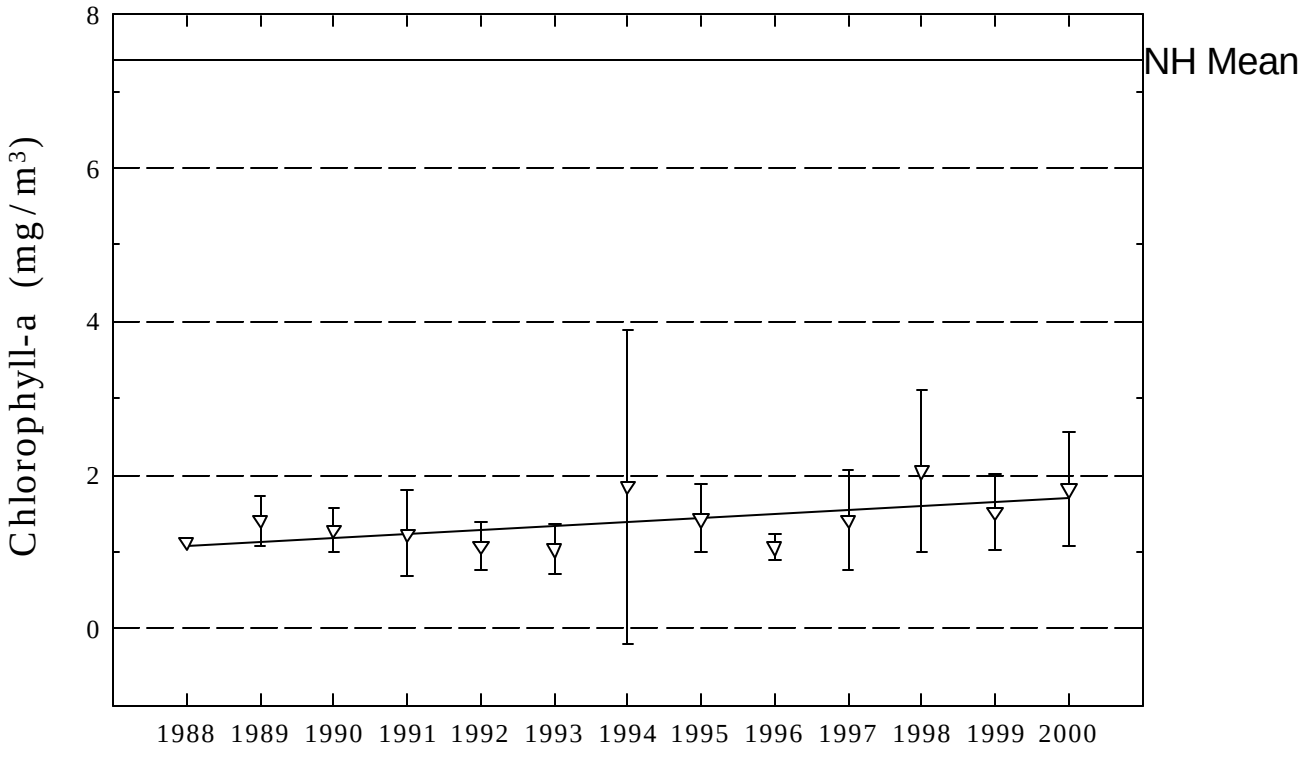
The Blue Green Algae. North American Lake Management Society, 1989. (608) 233-2836 or www.nalms.org

Stinson Lake

Figure 1. Monthly and Historical Chlorophyll-a Results



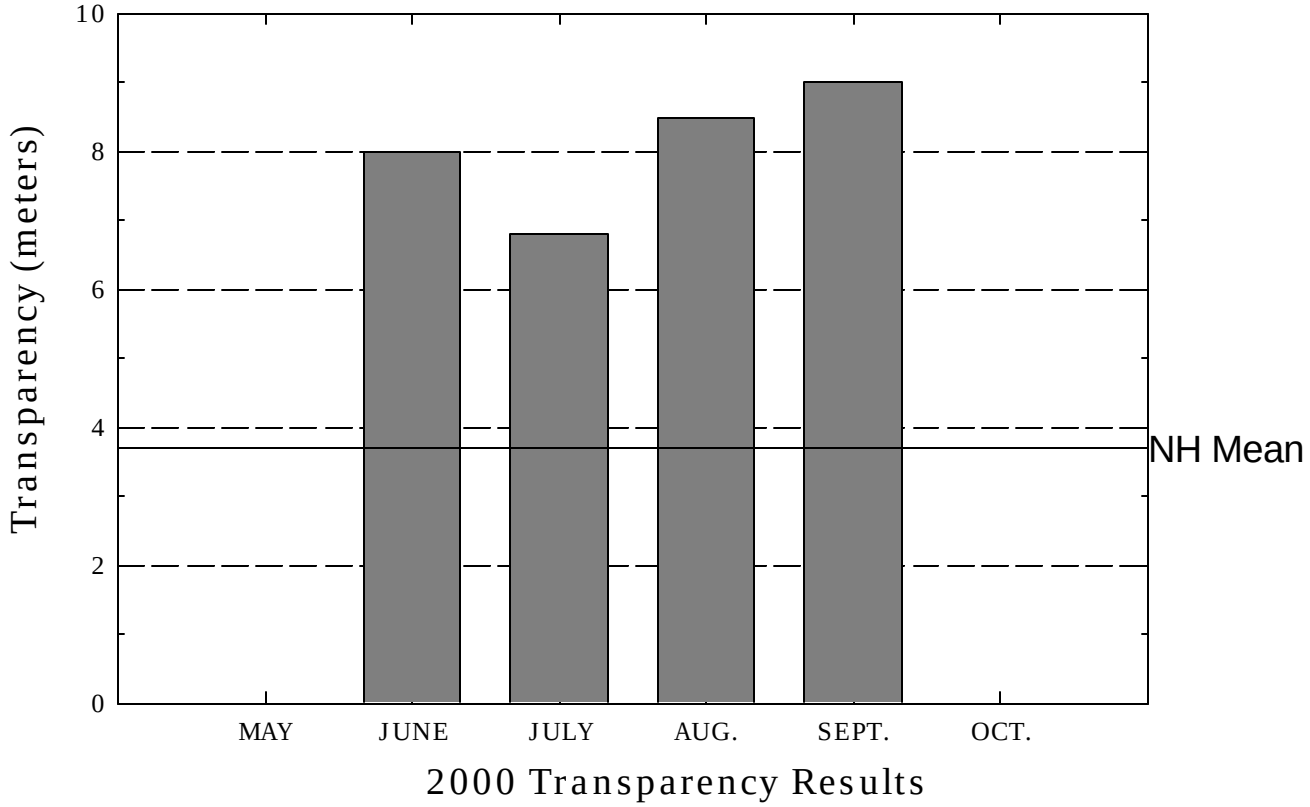
2000 Chlorophyll-a Results

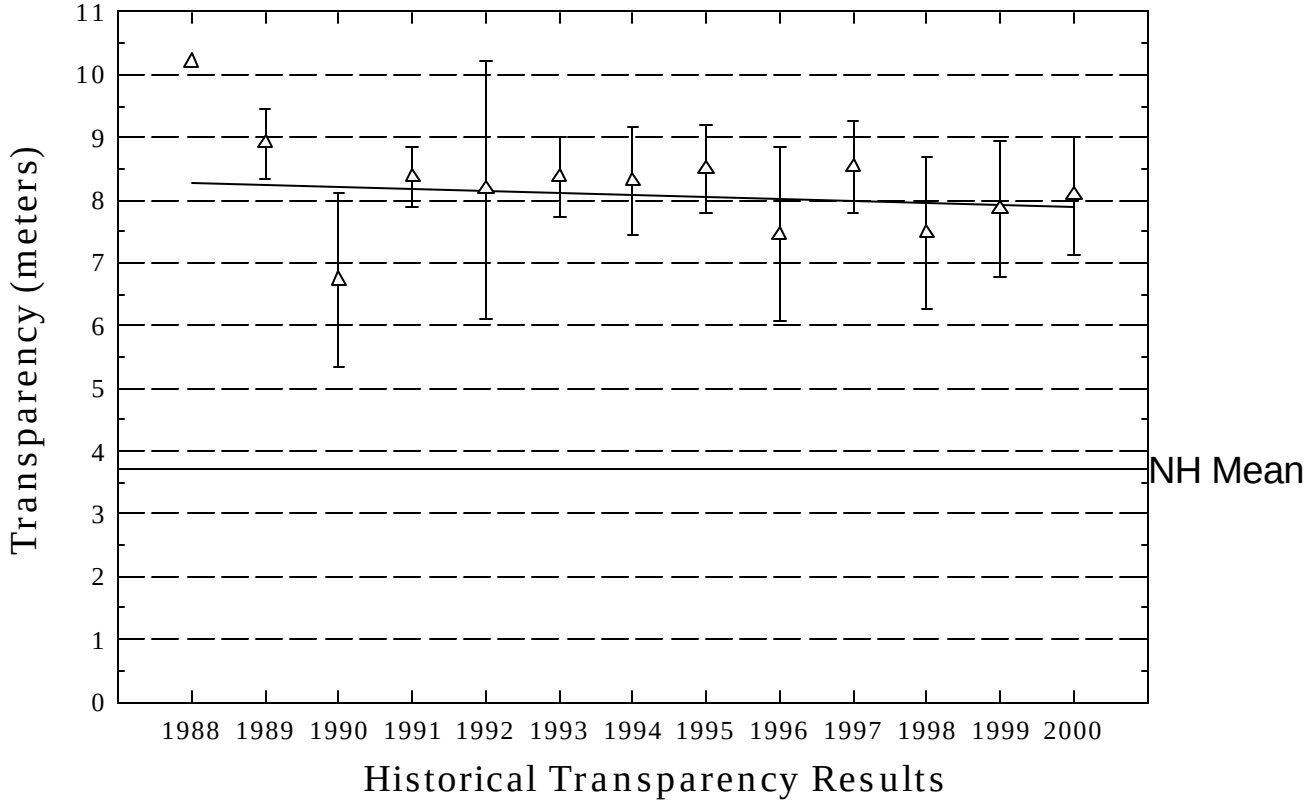


Historical Chlorophyll-a Results

Stinson Lake

Figure 2. Monthly and Historical Transparency Results





Stinson Lake

Figure 3. Monthly and Historical Total Phosphorus Data.

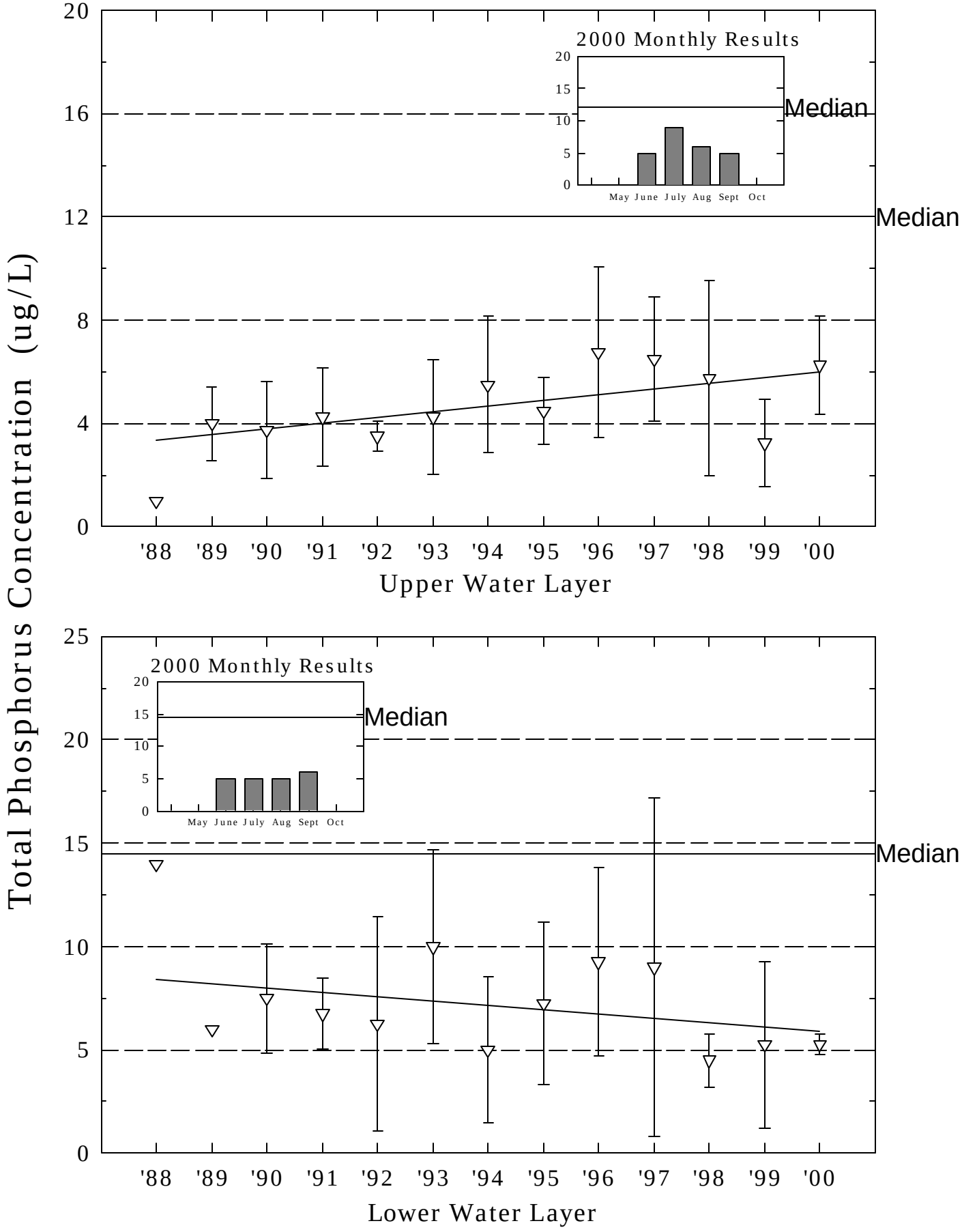


Table 1.

STINSON LAKE

RUMNEY

Chlorophyll-a results (mg/m^3) for current year and historical sampling periods.

Year	Minimum	Maximum	Mean
1988	1.13	1.13	1.13
1989	1.18	1.64	1.41
1990	0.93	4.89	2.00
1991	0.63	1.80	1.24
1992	0.68	1.45	1.07
1993	0.71	1.47	1.03
1994	0.36	4.88	1.85
1995	0.95	2.02	1.43
1996	0.92	1.28	1.06
1997	0.95	2.37	1.41
1998	1.11	3.41	2.05
1999	0.92	1.99	1.51
2000	1.28	2.89	1.82

Table 2.

STINSON LAKE

RUMNEY

Phytoplankton species and relative percent abundance.

Summary for current and historical sampling seasons.

Date of Sample	Species Observed	Relative % Abundance
08 / 30 / 1988	SPHAEROCYSTIS	47
07 / 14 / 1989	ANABAENA	96
	ASTERIONELLA	
	TABELLARIA	
06 / 18 / 1990	DINOBRYON	79
	ASTERIONELLA	12
07 / 08 / 1991	ANABAENA	48
	CHROCOCCUS	33
06 / 14 / 1992	DINOBRYON	100
06 / 18 / 1993	ASTERIONELLA	18
	DINOBRYON	18
	ANABAENA	18
07 / 17 / 1994	EUDORNIA	73
	ANABAENA	17
07 / 14 / 1995	CHRYSOSPHAERELLA	58
	PERIDINIUM	24
	SYNURA	7
06 / 03 / 1996	DINOBRYON	91
	ASTERIONELLA	4
	MELOSIRA	2
08 / 25 / 1997	ANABAENA	86
	DINOBRYON	8
	UROGLENOPSIS	3
08 / 10 / 1998	PERIDINIUM	47
	DINOBRYON	19
	CHRYSOSPHAERELLA	14

Table 2.

STINSON LAKE

RUMNEY

Phytoplankton species and relative percent abundance.

Summary for current and historical sampling seasons.

Date of Sample	Species Observed	Relative % Abundance
08 / 30 / 1999	CHRYSOSPHAERELLA	32
	MERISMOPEDIA	22
	CHROOCOCUS	17
08 / 29 / 2000	DINOBRYON	87
	MICROCYSTIS	6
	SYNURA	3

Table 3.

STINSON LAKE

RUMNEY

Summary of current and historical Secchi Disk transparency results (in meters).

Year	Minimum	Maximum	Mean
1988	10.2	10.2	10.2
1989	8.5	9.3	8.9
1990	4.5	8.6	6.2
1991	8.0	9.0	8.3
1992	5.7	10.5	8.1
1993	7.5	9.0	8.3
1994	7.5	9.5	8.3
1995	7.5	9.0	8.5
1996	6.0	9.3	7.4
1997	7.8	9.3	8.5
1998	6.3	9.0	7.4
1999	6.8	9.3	7.8
2000	6.8	9.0	8.0

Table 4.

STINSON LAKE

RUMNEY

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
COLLINS BK				
	1988	6.52	6.52	6.52
	1989	6.11	6.31	6.20
	1990	6.23	6.50	6.31
	1991	6.30	6.45	6.37
	1992	6.31	6.48	6.41
	1993	6.25	6.45	6.36
	1994	6.28	6.50	6.37
	1995	6.33	6.57	6.43
	1996	6.08	6.35	6.19
	1997	6.20	6.56	6.34
	1998	6.08	6.38	6.21
	1999	5.99	6.33	6.13
	2000	6.22	6.36	6.28
CROSS ROAD BROOK				
	1988	5.58	5.58	5.58
	1989	5.81	5.90	5.85
	1990	5.80	6.00	5.90
	1991	5.60	6.12	5.82
	1992	5.85	5.98	5.93
	1993	5.97	6.11	6.04
	1994	6.07	6.27	6.21
	1995	6.05	6.35	6.15
	1996	5.84	6.72	6.10
	1997	5.99	6.44	6.15

Table 4.

STINSON LAKE

RUMNEY

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
	1998	5.74	6.45	6.09
	1999	5.84	6.58	6.16
	2000	5.04	6.44	5.58
DOE TOWN BROOK				
	1988	5.85	5.85	5.85
	1989	5.86	5.95	5.90
	1990	6.08	6.26	6.15
	1991	6.10	6.38	6.19
	1992	6.27	6.50	6.35
	1993	6.27	6.35	6.30
	1994	6.28	6.48	6.37
	1995	6.18	6.50	6.28
	1996	6.00	6.19	6.09
	1997	6.16	6.62	6.30
	1998	5.86	6.59	6.24
	1999	5.88	6.47	6.17
	2000	6.18	6.45	6.28
EPILIMNION				
	1988	6.36	6.36	6.36
	1989	6.33	6.48	6.40
	1990	6.20	6.43	6.28
	1991	6.45	6.51	6.49
	1992	6.40	6.62	6.50
	1993	6.16	6.67	6.39
	1994	6.44	6.71	6.53
	1995	6.48	6.96	6.67

Table 4.

STINSON LAKE

RUMNEY

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
EPILIMNION				
	1996	5.49	6.44	5.91
	1997	6.14	6.75	6.46
	1998	6.22	6.69	6.35
	1999	6.07	6.58	6.28
	2000	6.30	6.64	6.47
HYPOLIMNION				
	1988	5.93	5.93	5.93
	1989	5.83	5.89	5.86
	1990	5.82	6.04	5.94
	1991	5.90	6.13	6.01
	1992	5.89	6.03	5.96
	1993	5.82	6.11	5.94
	1994	5.95	6.09	6.03
	1995	5.89	6.41	6.12
	1996	5.61	6.03	5.77
	1997	5.89	6.20	6.01
	1998	5.73	6.03	5.81
	1999	5.87	6.35	6.01
	2000	5.89	6.04	5.93
LOWER CROSS ROAD BK				
	1995	6.16	6.22	6.19

Table 4.

STINSON LAKE

RUMNEY

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
METALIMNION				
	1988	6.40	6.40	6.40
	1989	6.07	6.16	6.11
	1990	6.07	6.36	6.17
	1991	6.23	6.60	6.40
	1992	6.37	6.59	6.49
	1993	6.09	6.39	6.21
	1994	6.25	6.62	6.37
	1995	6.21	6.48	6.30
	1996	5.87	6.15	5.96
	1997	5.85	6.63	6.08
	1998	5.53	6.12	5.79
	1999	6.07	6.41	6.20
	2000	6.02	6.10	6.07
OUTLET				
	1988	6.34	6.34	6.34
	1989	5.89	6.45	6.09
	1990	6.30	6.42	6.35
	1991	6.42	6.70	6.55
	1992	6.47	6.52	6.50
	1993	6.41	6.66	6.49
	1994	6.39	6.62	6.50
	1995	6.45	6.80	6.61
	1996	6.17	6.42	6.28
	1997	6.30	6.62	6.43

Table 4.

STINSON LAKE

RUMNEY

pH summary for current and historical sampling seasons.
Values in units, listed by station and year.

Station	Year	Minimum	Maximum	Mean
	1998	6.25	6.48	6.37
	1999	5.82	6.68	6.20
	2000	6.37	6.58	6.48
SUCKER BK				
	1988	5.72	5.72	5.72
	1989	6.00	6.31	6.13
	1990	5.97	6.33	6.14
	1991	5.90	6.80	6.31
	1992	6.28	6.45	6.35
	1993	6.30	6.74	6.50
	1994	6.36	6.60	6.49
	1995	6.44	6.63	6.54
	1996	5.92	6.47	6.17
	1997	6.06	6.78	6.31
	1998	6.16	6.71	6.45
	1999	5.81	6.63	6.21
	2000	6.38	6.61	6.44

Table 5.

STINSON LAKE

RUMNEY

Summary of current and historical Acid Neutralizing Capacity.
Values expressed in mg/L as CaCO .

Epilimnetic Values

Year	Minimum	Maximum	Mean
1988	0.50	2.70	1.33
1989	1.80	1.87	1.84
1990	1.30	2.90	1.86
1991	1.70	2.70	2.15
1992	1.70	1.90	1.85
1993	1.20	2.00	1.70
1994	1.80	2.30	2.03
1995	2.20	4.10	3.05
1996	0.40	2.00	1.48
1997	2.10	3.10	2.48
1998	1.60	2.80	2.13
1999	1.50	2.20	2.00
2000	1.90	2.20	2.03

Table 6.

STINSON LAKE

RUMNEY

Specific conductance results from current and historic sampling seasons. Results in uMhos/cm.

Station	Year	Minimum	Maximum	Mean
COLLINS BK				
	1988	21.2	21.2	21.2
	1989	22.2	23.0	22.6
	1990	16.6	19.5	18.0
	1991	16.4	20.1	18.4
	1992	17.2	19.2	18.1
	1993	17.3	18.5	18.1
	1994	18.4	19.6	18.9
	1995	18.7	21.1	19.7
	1996	17.9	20.9	19.3
	1997	15.0	18.2	17.0
	1998	14.1	20.5	17.6
	1999	17.3	20.1	18.7
	2000	17.2	20.3	18.6
CROSS ROAD BROOK				
	1988	20.8	20.8	20.8
	1989	18.8	19.3	19.0
	1990	16.5	17.9	17.3
	1991	17.7	21.1	19.9
	1992	17.2	18.2	17.7
	1993	16.6	18.9	17.8
	1994	17.1	18.9	18.2
	1995	17.9	21.4	19.7
	1996	17.5	18.3	17.9
	1997	15.0	19.0	17.4

Table 6.

STINSON LAKE

RUMNEY

Specific conductance results from current and historic sampling seasons. Results in uMhos/cm.

Station	Year	Minimum	Maximum	Mean
	1998	14.4	19.1	17.3
	1999	17.0	23.2	20.5
	2000	16.1	20.9	18.4
DOE TOWN BROOK				
	1988	20.6	20.6	20.6
	1989	19.0	20.4	19.7
	1990	16.9	18.9	17.7
	1991	19.2	21.7	20.2
	1992	17.7	18.7	18.1
	1993	18.0	19.5	18.6
	1994	18.3	20.7	19.5
	1995	19.3	20.2	19.7
	1996	17.1	19.1	18.1
	1997	14.2	17.3	16.1
	1998	13.4	18.3	16.3
	1999	15.6	20.5	18.2
	2000	15.2	18.0	16.5
EPILIMNION				
	1988	23.7	23.7	23.7
	1989	22.7	23.3	23.0
	1990	20.2	22.9	21.4
	1991	20.8	23.1	22.1
	1992	21.5	22.6	22.0
	1993	22.0	23.0	22.5
	1994	22.7	23.9	23.2

Table 6.

STINSON LAKE

RUMNEY

Specific conductance results from current and historic sampling seasons. Results in uMhos/cm.

Station	Year	Minimum	Maximum	Mean
	1995	22.5	23.2	23.0
	1996	21.9	24.0	22.7
	1997	19.7	20.6	20.1
	1998	18.9	20.4	19.7
	1999	21.5	23.4	22.5
	2000	21.3	22.0	21.7
HYPOLIMNION				
	1988	23.7	23.7	23.7
	1989	23.7	24.7	24.2
	1990	23.5	24.5	23.9
	1991	21.4	25.6	23.6
	1992	23.1	24.7	24.0
	1993	23.3	24.4	23.8
	1994	23.6	25.1	24.2
	1995	22.9	24.8	23.7
	1996	23.3	24.1	23.5
	1997	19.7	21.2	20.4
	1998	21.8	23.0	22.2
	1999	22.7	23.4	23.0
	2000	21.9	22.8	22.4
LOWER CROSS ROAD BK				
	1995	24.0	29.4	26.7
METALIMNION				
	1988	23.6	23.6	23.6
	1989	23.1	23.1	23.1

Table 6.

STINSON LAKE

RUMNEY

Specific conductance results from current and historic sampling seasons. Results in uMhos/cm.

Station	Year	Minimum	Maximum	Mean
	1990	20.6	23.4	22.0
	1991	20.8	22.5	21.9
	1992	21.5	22.9	22.2
	1993	21.9	23.0	22.2
	1994	22.8	23.9	23.3
	1995	22.5	23.4	22.8
	1996	22.0	23.3	22.7
	1997	19.6	20.2	19.7
	1998	20.3	22.2	21.0
	1999	22.1	22.7	22.3
	2000	21.5	22.2	21.8
OUTLET				
	1988	23.7	23.7	23.7
	1989	23.1	23.6	23.3
	1990	21.1	23.3	22.3
	1991	21.5	22.5	22.0
	1992	21.4	22.3	21.9
	1993	21.7	22.9	22.4
	1994	23.4	24.4	23.8
	1995	22.6	29.0	24.5
	1996	22.0	22.6	22.3
	1997	19.9	20.7	20.2
	1998	18.8	20.6	19.8
	1999	21.3	23.1	22.4
	2000	21.2	22.9	21.9

Table 6.

STINSON LAKE

RUMNEY

Specific conductance results from current and historic sampling seasons. Results in uMhos/cm.

Station	Year	Minimum	Maximum	Mean
SUCKER BK				
	1988	19.4	19.4	19.4
	1989	17.9	19.0	18.4
	1990	17.4	19.8	18.8
	1991	18.8	25.6	22.3
	1992	17.4	18.9	18.4
	1993	19.3	25.4	21.9
	1994	20.2	20.8	20.5
	1995	20.8	25.4	23.4
	1996	17.1	26.1	20.9
	1997	14.9	21.4	18.2
	1998	14.0	22.1	17.6
	1999	17.4	25.9	22.1
	2000	17.7	20.5	18.4

Table 8.

STINSON LAKE

RUMNEY

Summary historical and current sampling season Total Phosphorus data. Results in ug/L.

Station	Year	Minimum	Maximum	Mean
COLLINS BK				
	1988	26	26	26
	1989	11	16	13
	1990	5	10	7
	1991	9	28	17
	1992	6	9	8
	1993	14	21	17
	1994	10	49	23
	1995	8	13	10
	1996	4	10	7
	1997	11	14	12
	1998	7	32	17
	1999	10	13	11
	2000	9	26	18
CROSS ROAD BROOK				
	1988	< 1	1	1
	1989	2	6	4
	1990	1	10	4
	1991	2	27	12
	1992	1	4	2
	1993	2	8	5
	1994	1	5	2
	1995	3	6	5
	1996	4	11	8
	1997	< 1	10	5

Table 8.

STINSON LAKE

RUMNEY

Summary historical and current sampling season Total Phosphorus data. Results in ug/L.

Station	Year	Minimum	Maximum	Mean
	1998	1	7	4
	1999	2	38	14
	2000	< 5	18	8
DOE TOWN BROOK				
	1988	11	11	11
	1989	3	4	3
	1990	1	5	2
	1991	2	15	7
	1992	2	2	2
	1993	2	6	4
	1994	4	7	5
	1995	2	4	3
	1996	3	10	7
	1997	6	8	6
	1998	5	12	9
	1999	8	15	11
	2000	7	18	12
EPILIMNION				
	1988	< 1	1	1
	1989	3	5	4
	1990	1	9	4
	1991	3	7	4
	1992	3	4	3
	1993	2	7	4
	1994	2	8	5

Table 8.

STINSON LAKE

RUMNEY

Summary historical and current sampling season Total Phosphorus data. Results in ug/L.

Station	Year	Minimum	Maximum	Mean
	1995	3	6	4
	1996	3	10	6
	1997	4	9	6
	1998	2	11	5
	1999	1	5	3
	2000	< 5	9	6
HYPOLIMNION				
	1988	14	14	14
	1989	6	6	6
	1990	4	10	8
	1991	5	9	6
	1992	3	14	6
	1993	5	16	10
	1994	1	8	5
	1995	4	12	7
	1996	4	14	9
	1997	3	21	9
	1998	3	6	4
	1999	2	11	5
	2000	< 5	6	5
LOWER CROSS ROAD BK				
	1995	8	8	8
METALIMNION				
	1988	10	10	10
	1989	5	5	5

Table 8.

STINSON LAKE

RUMNEY

Summary historical and current sampling season Total Phosphorus data. Results in ug/L.

Station	Year	Minimum	Maximum	Mean
	1990	5	12	7
	1991	5	8	6
	1992	3	5	4
	1993	4	7	5
	1994	3	7	4
	1995	2	7	5
	1996	5	10	7
	1997	7	15	10
	1998	5	18	8
	1999	3	13	6
	2000	5	13	7
OUTLET				
	1988	14	14	14
	1989	4	4	4
	1990	2	9	4
	1991	2	6	4
	1992	2	6	3
	1993	2	8	4
	1994	1	8	4
	1995	2	9	6
	1996	4	16	7
	1997	< 1	6	3
	1998	1	5	3
	1999	2	5	3
	2000	< 5	5	5

Table 8.

STINSON LAKE

RUMNEY

Summary historical and current sampling season Total Phosphorus data. Results in ug/L.

Station	Year	Minimum	Maximum	Mean
SUCKER BK				
	1988	10	10	10
	1989	5	6	5
	1990	1	9	5
	1991	4	30	11
	1992	4	5	4
	1993	2	5	3
	1994	3	5	4
	1995	2	8	5
	1996	3	9	5
	1997	< 1	14	6
	1998	1	8	4
	1999	3	7	4
	2000	< 5	17	8

Table 9.

STINSON LAKE

RUMNEY

Current year dissolved oxygen and temperature data.

Depth (meters)	Temperature (celsius)	Dissolved Oxygen (mg/L)	Saturation (%)
		August 29, 2000	
0.1	20.5	8.3	92.1
1.0	20.5	8.2	90.9
2.0	20.4	8.2	91.0
3.0	20.3	8.3	92.0
4.0	20.2	8.3	91.2
5.0	19.9	8.5	92.7
6.0	19.5	8.5	92.9
7.0	18.9	8.6	92.2
8.0	15.4	10.1	101.4
9.0	12.7	10.0	93.9
10.0	9.0	9.2	79.6
11.0	7.6	9.1	76.0
12.0	7.1	8.9	73.6
13.0	6.7	8.6	69.9
14.0	6.2	8.0	64.3
15.0	6.1	7.5	60.1
16.0	6.0	7.2	57.8
17.0	5.9	6.7	53.7
18.0	5.8	6.2	49.8
19.0	5.7	6.0	47.7
20.0	5.7	5.7	45.3
21.0	5.7	5.6	44.4
22.0	5.7	5.5	43.6
22.5	5.9	4.4	35.1

Table 10.

STINSON LAKE

RUMNEY

Historic Hypolimnetic dissolved oxygen and temperature data.

Date	Depth (meters)	Temperature (celsius)	Dissolved Oxygen (mg/L)	Saturation (%)
July 14, 1989	19.0	5.0	6.3	49.0
June 18, 1990	16.5	7.0	10.0	82.1
July 15, 1990	21.0	6.0	8.1	64.9
August 8, 1990	21.0	6.0	6.1	48.8
July 8, 1991	21.0	6.5	8.0	64.9
June 14, 1992	20.0	5.0	7.9	61.7
June 18, 1993	21.0	4.2	8.8	66.0
July 17, 1994	19.5	6.5	8.5	67.0
July 14, 1995	20.0	6.0	6.2	50.0
June 3, 1996	21.0	5.0	9.6	74.0
August 25, 1997	22.0	6.8	6.5	52.0
September 17, 1998	22.0	6.3	3.7	29.0
August 30, 1999	21.0	6.0	4.3	33.0
August 29, 2000	22.5	5.9	4.4	35.1

Table 11.

STINSON LAKE

RUMNEY

Summary of current year and historic turbidity sampling.
Results in NTU's.

Station	Year	Minimum	Maximum	Mean
COLLINS BK				
	1997	0.2	1.0	0.4
	1998	0.2	1.2	0.5
	1999	0.1	0.2	0.2
	2000	0.2	0.9	0.4
CROSS ROAD BROOK				
	1997	0.0	0.2	0.1
	1998	0.1	0.5	0.2
	1999	0.1	0.3	0.2
	2000	0.0	1.3	0.4
DOE TOWN BROOK				
	1997	0.0	0.6	0.2
	1998	0.1	1.5	0.6
	1999	0.2	0.3	0.2
	2000	0.2	0.6	0.4
EPILIMNION				
	1997	0.1	0.4	0.2
	1998	0.2	0.4	0.3
	1999	0.1	0.5	0.2
	2000	0.2	0.2	0.2
HYPOLIMNION				
	1997	0.1	1.0	0.5
	1998	0.2	1.0	0.5
	1999	0.2	0.6	0.3
	2000	0.2	0.4	0.3

Table 11.

STINSON LAKE

RUMNEY

Summary of current year and historic turbidity sampling.
Results in NTU's.

Station	Year	Minimum	Maximum	Mean
METALIMNION				
	1997	0.2	0.6	0.3
	1998	0.2	0.5	0.4
	1999	0.3	0.6	0.4
	2000	0.2	0.4	0.3
OUTLET				
	1997	0.2	0.4	0.3
	1998	0.1	0.9	0.4
	1999	0.2	0.5	0.3
	2000	0.1	0.6	0.4
SUCKER BK				
	1997	0.0	0.4	0.1
	1998	0.1	1.2	0.4
	1999	0.1	0.6	0.2
	2000	0.1	1.6	0.6